DOCUMENT RESUME

ED 041 630 PS 003 292

AUTHOR Jose, Jean
TITLE Teacher-Pupil Interaction as it Relates to Attempted Changes in Teacher Expectancy of Academic Ability and Achievement.
PUB DATE Mar 70
NOTE 8p.; Paper presented at the annual meeting of the American Educational Research Assoc., Minneapolis, Minnesota, March, 1970

EDRS PRICE EDRS Price MF-$0.25 HC-$0.50
DESCRIPTORS Academic Achievement, Behavior Change, Classroom Observation Techniques, *Expectation, *Student Teacher Relationship, *Teacher Attitudes
IDENTIFIERS Teacher Expectation

ABSTRACT

This study is a partial replication of Rosenthal's (1968) study of teacher expectation in which students falsely identified to teachers as being capable of doing better work showed greater intellectual growth than control students. The present study sought to determine whether or not this result could be duplicated and whether or not teacher-student classroom interaction would be affected by the information. False information was leaked to first and second grade teachers about certain of their students who were supposed to have special late-blooming academic abilities. Four experimental students and four control students were randomly selected from each of 18 classes. A total of 144 students were pre- and posttested on the Test of General Ability and the reading and arithmetic subtests of the Metropolitan Achievement Tests. Classroom interaction was pre- and post-measured by use of the Interaction Analysis Scale. After posttesting, teachers also completed questionnaires concerning student expectancy. Results revealed that the experimental group did not make significantly higher gains than the control group on any of the tests. In addition, classroom interaction measures showed no special treatment accorded the "special" students. (MH)

ED041630

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

TEACHER-PUPIL INTERACTION AS IT RELATES TO ATTEMPTED CHANGES IN TEACHER EXPECTANCY OF ACADEMIC ABILITY AND ACHIEVEMENT

JEAN JOSE' Ph.D.

1970

Presented to the Annual Meeting of
the American Educational Research Association
Minneapolis, Minnesota

PS003292

The present investigation was concerned primarily with the problem of what actually occurs within the relationship between the student and the teacher (after false information has been presented to the teacher concerning certain students) as an explanation of how the expectancy of one individual becomes translated into behavior in such a way as to elicit the expected behavior from another individual. A partial replication of the Rosenthal and Jacobson (1968) study with refinements of certain aspects and the addition of a measure of teacher-pupil interaction as an attempt to observe changes that might occur in student behavior was the intent of this investigation.

THE PROBLEM

As a partial replication of the study by Rosenthal and Jacobson (1968), one of the basic concerns of the present investigation was whether the students who had been identified to teachers as being capable of doing better would show greater increases in intellectual growth than a group of control students. In addition to IQ, it was felt that student progress in school achievement might also provide worthwhile information, therefore a standardized achievement test was administered also.

It seemed reasonable to consider changes in the teachers' behavior toward identified students as one possible explanation for possible changes in student performance. The use of an interaction analysis scale was selected as a means of measuring any change that occured after establishment of expectancy.

Specifically then, this study was concerned with two questions:

1) Do the students' scores on IQ and achievement tests change after false information concerning these students has been given to the teacher?

2) Does the teachers' behavior change toward those students about whom she is given false information?

SUBJECTS

In view of the fact that the most dramatic results were interpreted by Rosenthal and Jacobson (1968) to occur in grades one and two, the present study was limited to those two grades. Further, all changes in reported IQ in the Rosenthal study were obvious at the end of four months. No greater gains were realized later in their investigation. Eighteen teachers (nine first grade and nine second grade) and 144 students (eight from each classroom) were selected from public elementary schools randomly and randomly assigned to the experimental and control groups of equal numbers of males and females in each group.

To determine whether the teachers were familiar with the experimental work done in the area of teacher or pupil expectancies, an informal interview technique was used prior to selection of the teachers. At the end of the investigation the teachers were asked whether they had any knowledge, prior to the investigation, of Rosenthal and Jacobson's (1968) work or of teacher expectancy.

PROCEDURES

The study was presented to the teachers as if it were two separate investigations. One of these studies was presented as testing of students and identifying for the teacher students who would be "late bloomers". In this study the teachers were aware that the results were intended to provide them valuable information about students. This was as that was revealed to them.

The second study involved the analysis of teacher-pupil interaction. It was approached from a very different position. Teachers were aware that a "general sample" of classroom interaction was to be explored. The teacher was told that the observers were students who were being trained to use

interaction analysis.

Prior to giving the false information to the teacher, an IQ test (Teh Test of General Ability, Flanagan, 1960) and the reading and arithmetic subtests of the Metropolitan Achievement Tests were administered to all students in the 18 classrooms. The teachers were told that these were "tests of Inflected Acquisition".

From this population, four experimental and four control students were randomly selected from each class (the students were unknown to the experimenter). A pre-measure of teacher behavior was obtained by three trained observers through the use of the Interaction Analysis Scale adapted from Bales (1960) Scale and developed for this purpose. The observers spent two 30 minute sessions per day for two days, a total of four sessions, in each of the 18 classrooms.

The teachers were then given information by means of a written list concerning the four experimental students in their class to the effect that these students had scored high on a test which predicted 'academic blooming' and could be expected to perform better academically in the near future. After presenting the information to the teachers, observations of teacher behavior were made after one week and at the end of every four weeks for a period of 16 weeks.

At the end of this time, post tests of the Test of General Ability and the Metropolitan Achievement Tests were administered to experimental and control students by naive assistants and these tests were scored "blind". At this time also, each teacher completed a questionnaire concerning changes in the students' behavior and grades in arithmetic and reading.

In order to determine whether the information given to the teacher had established, modified, or any way affected the teachers' apparent expectancy, each teacher completed a questionnaire two weeks after the post-testing concerning her expectancy for the students involved.

RESULTS

A separate three-factor analysis of variance was used for IQ, reading achievement, and arithmetic achievement. No statistical significance was found for treatment by sex of student by grade level interaction or for treatment by sex of student or by grade level for IQ, reading achievement, and arithmetic achievement. This would suggest that the experimental treatment conditions, as defined and employed in this investigation, resulted in little difference in the performance of; the experimental and control subjects in any of the areas investigated.

The results from the Interaction Analysis Scale suggest three points;

1) There was little consistency in the direction of change in the teachers' behavior after the information concerning the experimental children was given to her.

2) Any change in behavior which occurred after the presentation of the expectancy information to the teacher, tended to be in the same direction for both experimental students and control students.

3) There were few differences in the teachers' behavior towards the experimental students and the control students throughout the investigation.

In view of this, it seemed apparent that expectancy (as used in this study) had little effect on the teachers' overt behavior.

In order to determine whether experimental and control students grades differed from first semester to second semester, a t-test was used to compare gain scores of the experimental students with gain scores of the control students (first semester grades served as pre-tests and second semester grades served as post-tests). The results of the t-tests (-0.19 for reading and -0.87 for arithmetic, p. .05) indicated that there was no significant advantage associated with teachers' favorable expectations, therefore, it seemed that the information concerning the academic ability of the experimental students did not influence the teachers' assessment of their academic performance. The questionna ire results

PS 003292

(along with comments volunteered by the teachers) also suggested that there was little advantage associated with teachers' favorable expectations (as used in this study) with respect to the students' classroom performance.

At the close of the investigation, in an attempt to determine whether the teachers' expectancy had really been modified by the information given to them, the teachers completed a questionnaire concerning their opinions about the experimental children and the predictive value of the test. Eleven of the 18 teachers stated that they had not expected more from the children who had been predicted to 'bloom academically' whereas seven stated that they did expect more as a result of the information given to them from the test. Of the seven who said they expected the experimental children to improve only four indicated that they felt the children really had shown improvement.

It is interesting to note however, that the experimental children of these four teachers showed less improvement on the standardized tests in reading and arithmetic than did the control students in these four classrooms (Table 5).

TABLE 5

Sum of Gains Made by Students in Four Classrooms

Class rooms	Grade Level	Gains					
		Experimental			Control		
		IQ	Reading	Arith.	IQ	Reading	Arith.
A	1	16	35	31	24	49	48
B	2	40	3	46	18	18	64
C	2	19	21	37	12	13	50
D	2	-14	21	40	-23	16	59
TOTAL		61	80	154	31	96	221

In one of these four classrooms (A) the experimental students actually gained less in IQ than did the control students although in total IQ the experimental showed greater-but not statistically significant-gain. In addition, in teacher grade assessment the experimental students showed no appreciable advantage over the control students (19 experimental students in four classes improved; 18 control students in the four classes improved). Also, no statistically significant differences were observed in the behavior of these four teachers.

DISCUSSION

It appears that the experimental conditions, as described by Rosenthal and Jacobson (1968) and replicated in this study, resulted in little difference in the performance of the experimental students in any of the areas investigated. This is in contrast with Rosenthal's (1968) findings.

Although no significant differences were found in IQ, achievement, students' grades or behavior, and no differences were observed in teacher behavior, this must be considered within the light of the possibility that the expectancy of the teacher (as described by Rosenthal and Jacobson, 1968) man not be a good extimate of teachers' genuine perception of student ability. No attempt was made to go beyond the Rosenthal and Jacobson paradigm in this study. However, if one compares the similarity in results between this study and Rosenthal's there are many similarities. Some students achieved high gain scores in IQ in both studies. In this investigation the gains were non-significant since students in the control group did similarily. Large numbers in this study may account for this contrast.

The results indicated that 61% of the teachers (after the experiment and who were still naive as to the nature of the study) stated that they had not expected the children to show improvement as a result of test information. Many stated that they knew the children and their backgrounds and therefore

knew what the child could be expected to do. It seems possible from this that it is not the theory of expectancy that is questionable. Rather the means by which the 'establishment' or modification of the expectancy is attempted should be questioned. In Rosenthal's study no attempt was made to evaluate the establishment of expectancy.

One might conclude that, within the limitations of the treatments and population employed in this study, the experimental treatment condition had no advantage. However, it may be considered also that, in many instances, it is doubtful that expectancy can be considered as the giving of information only. It seems clear that expectancy may involve much more than just the reception of information. Perhaps those who wish to use the construct of expectancy in classroom practices would do well to take special precautions to insure that teachers' expectancies of students have truly been modified.